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(71) Applicant:  
SAMSUNG ELECTRONICS CO., LTD.  
Suwon-City, Kyungki-do (KR)

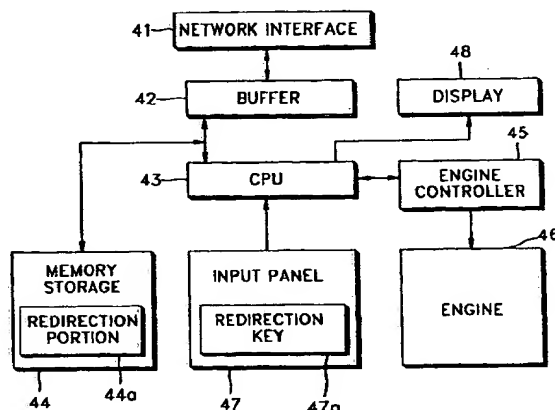
(72) Inventor: Han, Jeong-Soo  
Bundang-gu, Sungnam-city, Kyungki-do (KR)

(74) Representative:  
Brandon, Paul Laurence et al  
APPLEYARD LEES,  
15 Clare Road  
Halifax, West Yorkshire HX1 2HY (GB)

### (54) Network printer system and method of processing waiting print job when print error occurs

(57) A method of processing a waiting print job of a printer is provided in which a print error occurs in a network printer system to which a plurality of printers are connected and a plurality of user computers are connected to use the printers in common. According to the method, whether a print error interrupting printing has occurred is determined (step A). If a print error is determined to have occurred in step A, a waiting print job of a printer is transmitted in which a print error has occurred to a working printer. Thus, a received waiting print job of one printer in which a print error interrupting printing occurs can be transferred to another working printer so that interruption of printing of the waiting job can be avoided. A corresponding system is also disclosed.

FIG. 2



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installed. A redirection portion 44a installed in the memory storage 44, which is one of the operating programs of the CPU 43, is executed when the redirection key 47a of the input panel 47 is set to be turned on and a print error occurs. In addition to the above manipulation of the redirection key 47a of the input panel 47, the execution of the redirection portion 44a can be selected by a user through a printer settings menu provided by the printer driver installed in the memory storage of the computers 10. In this case, the printer driver enables a user to select a redirection selection menu in the settings of the connected printers 40.

**[0017]** When a print error interrupting printing such as out of paper, paper jam, out of toner, and other operational error of elements in the engine 46 occurs, the redirection portion 44a transfers a waiting print job stored in the memory storage 44 to another working printer.

**[0018]** The steps of processing a waiting print job, when a print error occurs, in the network printer system having the above structure is described with reference to FIG. 3.

**[0019]** First, as an initialization step, conditions needed for the execution of redirection are set (step 100). For example, types of print errors subject to the execution of redirection are set and a redirection printer to which a waiting print job is transferred is set. When only two printers 40 are installed on the network 20, the first printer 40 sets the second printer 40 as a redirection printer and the second printer 40 sets the first printer 40 as a redirection printer. However, when three or more printers 40 which can be assigned as a redirection printer are connected to the network 20, multiple redirection printers can be set. That is, one printer 40 can set multiple printers as redirection printers. Here, the order of priority should be given to the redirection printers.

**[0020]** As the type of print errors, for example, there is "out of paper", "out of toner", "paper jam", and "incorrect paper size" (difference between the paper size set in the text and that provided by the printer). A user sets part of, or all of, the above-mentioned print errors as a print error by which redirection is executed. Priority to the redirection printers can be given in various ways. For example, priority can be given to a printer located close to the printer transferring print data.

**[0021]** After the above initialization step, the printer 40 stores the received print data in a queue of the memory storage 44 and processes a waiting print job according to the principle of first-in first-out so that first received print data is printed first. If a print error occurs during the above printing process (step 110), it is determined whether redirection is set by the redirection key 47a of the printer 40 or received information of the printer settings menu from the user computer 10 (step 120).

**[0022]** If the redirection is determined to be set in step 120, it is determined whether the type of a print

error corresponds to the print error subject to the execution of redirection (step 130). When the type of a print error belongs to the redirection execution errors set by the user, whether a waiting print job exists in the memory storage 44 is searched (step 140).

**[0023]** If it is determined in step 140 that a waiting print job exists, the redirection printers are searched in an order of priority whether a print job is possible (step 150). When it is determined in step 150 that the waiting print job data can be transferred from a printer having a print error to a set redirection printer (step 160), the waiting print job is transferred to the set redirection printer (step 170).

**[0024]** When it is determined in step 150 that the redirection printers are in a data off-line mode in which receiving data is not possible or in a state in which a printing process cannot be performed due to a print error, a redirection execution error message is indicated by the display 48 (step 190). After step 170, it is determined whether there is any remaining waiting print job data (step 180). If it is determined in step 180 that a waiting print job data remains, step 170 is repeated until no waiting print job is left.

**[0025]** As described above, in the network printer system and the method of processing a waiting print job when a print error occurs according to preferred embodiments of the present invention, a received waiting print job of one printer in which a print error interrupting printing occurs can be transferred to another working printer so that interruption of printing of the waiting job can be avoided.

**[0026]** The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

**[0027]** All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

**[0028]** Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

**[0029]** The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

FIG. 1

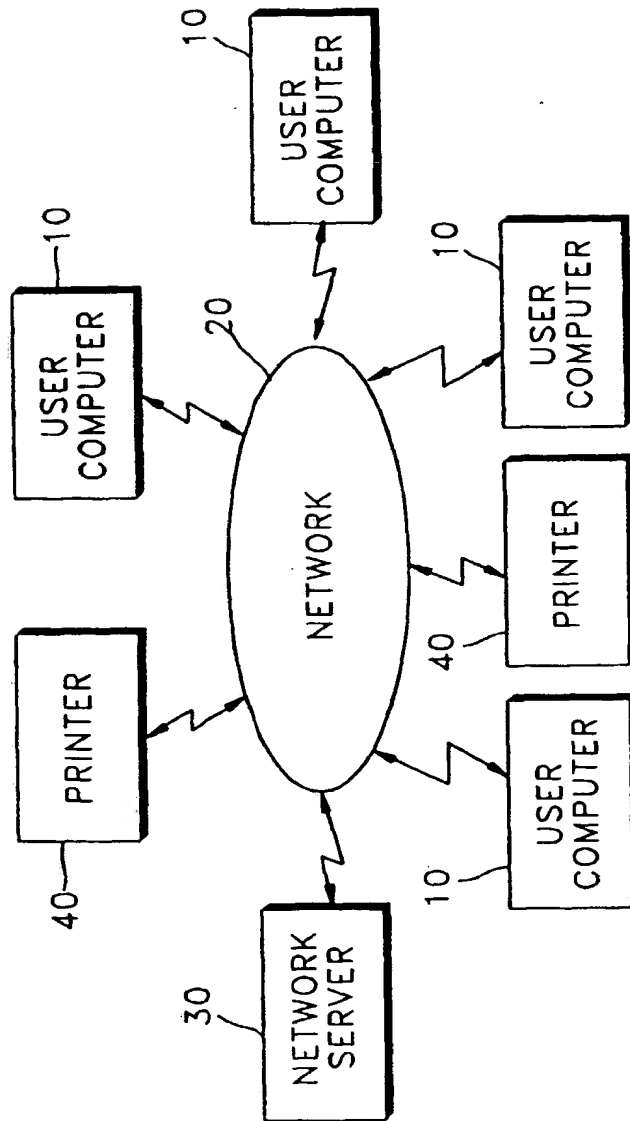


FIG. 3

